Informational Hearing for Proposed Amended Regulation XX SOx RECLAIM Program

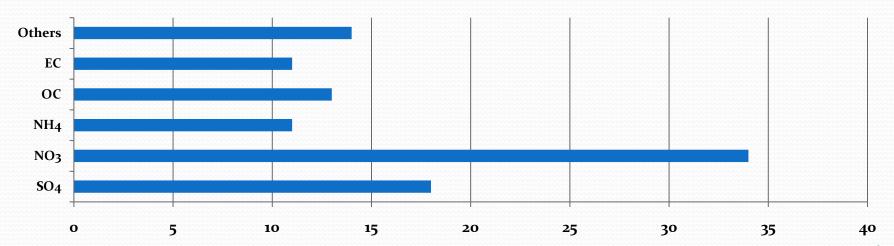
SCAQMD January 08, 2010

Background

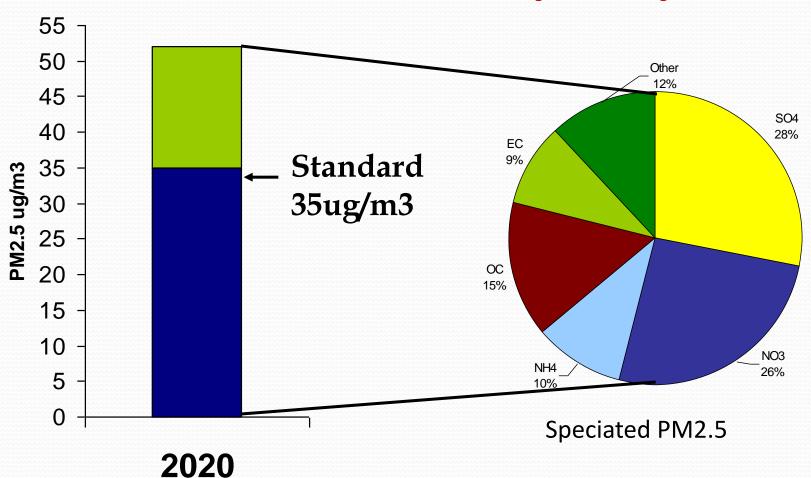
- Cap-and-trade program since 1994
- 30+ facilities; 51% of total stationary source inventory
- Total RTC holdings reduced: 29.9 → 11.7 tons per day (66% reduction)
- Total actual emissions reduced: 19.8 → 10.3 tons per day (48% reduction)
- RTC price(2008): \$1,474/ton
- Number of trades(2008): 58/year (33 @ \$cost & 25 @ no-cost)

Why Reduce SOx?

- Basin 52% of National PM2.5 Exposure Burden
- Federal Annual Average Standard By 2015
 - 2007 AQMP
- Federal 24-Hour Average Standard By 2020
- SOx is Significant Building Block of PM2.5
 (1 ton SOx = 1.5 tons PM2.5 = 15 tons NOx)



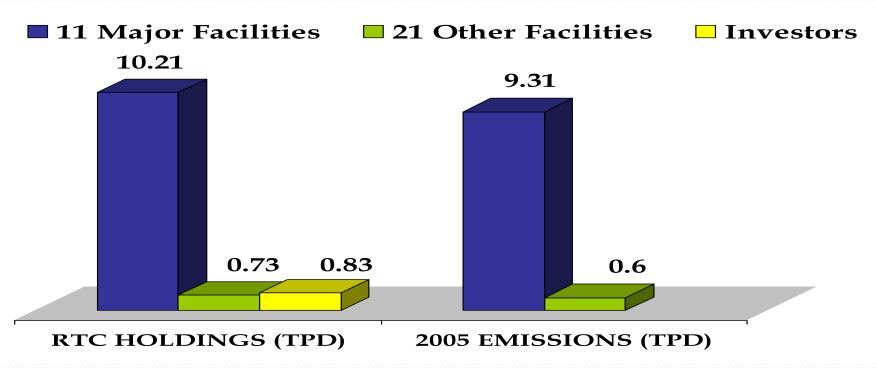
Predicted Maximum 24-hour PM 2.5 Concentration (2020)



Legal Requirements

- State Law Requirements
 - Command and control equivalency
 - Periodic BARCT reassessments
- SIP Commitment
 - 2007 AQMP: Minimum 3 tons per day reductions by 2014
- Other Potential Drivers to Consider
 - Federal 24 Hour PM2.5 Standard
 - EPA Efforts To Tighten Standards
 - Annual Average PM2.5 and SO2
 - More Stringent State PM2.5 Standard

SOx RECLAIM Universe



- Refineries (6, with 1 at 2 Locations)
- BP Coke Calciner
- Rhodia (Acid Manufacturing)
- Owens Brockway (Glass Manufacturer)
- California Portland Cement

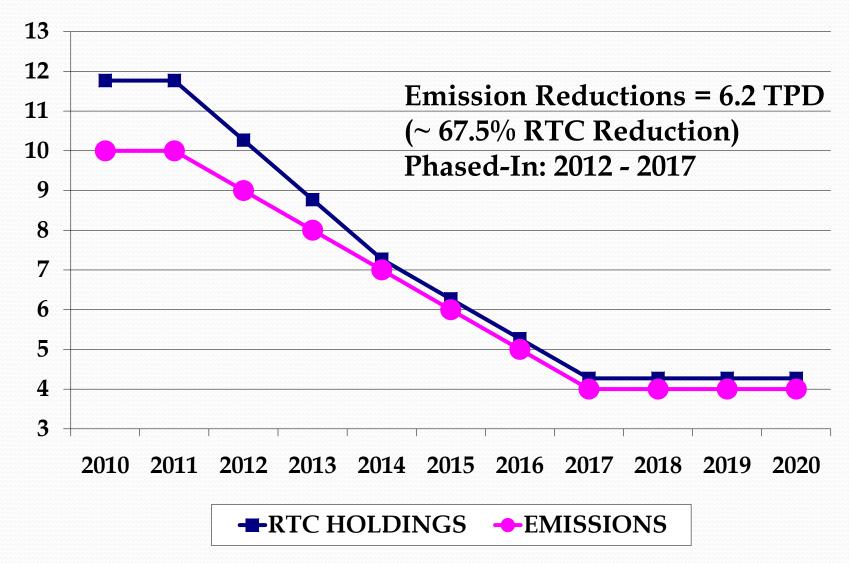
Rule Development Process

- Started in February 2008
- Multiple Stakeholders Meetings
- Preliminary Staff Analysis Released in April 2008
- Third Party Consultants Hired in September 2008
- Consultants' Reports Released in December 2008 & April 2009 (Refinery)
- Public Workshop Conducted in June 2009
- CEQA Notice of Preparation & Draft Staff Report Released in June 2009
- Refinery Committee Meeting December 11, 2009

Staff Proposal

	Tier I (1993 BARCT for Year 2000)	New BARCT	Percent Reduction from Tier I	Cost Effectiveness
Fluid Cat Cracking Units	13.7 lbs/Mbarrels feed	5 ppmv 3.25 lbs/Mbarrels feed	80%	\$20 K per ton
Sulfur Recovery Tail Gas	Reported Value Avg. 9.03 lbs/hour	5 ppmv 5.28 lbs/hour	42%	\$26 K per ton
Boilers Heaters	6.76 lbs/mmscft	40 ppmv 6.76 lbs/mmscft	0%	Not applicable
Sulfuric Acid Plant	Reported Value Avg. 5.08 lbs/ton	10 ppmv 0.14 lbs/ton acid	97%	\$2 K per ton
Coke Calciner	Reported Value Avg. 2.47 lbs/ton coke	10 ppmv 0.11 lbs/ton coke	96%	\$10 K per ton
Container Glass	Reported Value Avg. 2.51 lbs/ton glass	5 ppmv 0.03 lbs/ton glass	98%	\$5 K per ton
Cement Kiln	Reported Value Avg. 0.05 lbs/ton	5 ppmv 0.04 lbs/ton clinker	20%	\$19 K per ton

Staff Proposal



Staff Proposal (Cont.)

- Investment (Present Value for 25 Years) = \$745 Million
- Weighted Average Cost Effectiveness
 - = \$13K Per Ton SOx Reduced

(Range: \$2K - \$47K Per Ton SOx Reduced)

- CEQA Alternatives: 3 tpd 6.2 tpd Reductions
- Alternate Shave Methodology
 - 67.5% for 11 Major Facilities (Instead of 64% Across the Universe)
 - 18 Facilities Harmless, 3 Facilities with 10% to 50% Shave

Key Issues

- Stranded Investments
- SOx Shave Methodology
- BARCT & Shave Levels
- Market Viability
- Water Demand & Wastewater Discharge
- CEQA & Permitting

Proposed Work Plan

Issue - Stranded Investments

Wet gas scrubber applications will render the Rule 1105.1 ESPs useless.

Proposed Action

- Refineries to provide facility-specific actual ESP costs and reasons why ESPs would become inoperable.
- Staff to analyze data, report to the Refinery Committee and recommend options to mitigate such impacts, if feasible.

Issue – SOx Shave Methodology

- Staff recommended alternative shave to address low emission reduction potential from twenty-one (21) facilities (65% universe with 6% emissions)
- WSPA/Refineries have also developed its own alternative shave proposal.

Proposed Action

- WSPA/Refineries to provide staff with their proposal.
- Staff to work with WSPA to analyze the proposal and determine if that meets state's law (equivalency and BARCT assessment.)

Issue – BARCT and Shave Levels

- Proposed shave levels too drastic
- Staff underestimated costs
- Reductions and shave targets more in line with the 2007 AQMP target, could allow more cost effective controls

Proposed Action

- WSPA/Refineries to provide staff with their analysis for alternative control technologies, estimated costs, emission and RTC reductions.
- Staff to use a third party reviewer to review the original consultants' cost analyses with input/data from stakeholders.

Issue – Market Viability

- Not enough trading partners
- Competitiveness issues
- Limited ability of controls beyond BARCT
- Uneven distribution of RTC holdings

Proposed Staff Action

- Commit to use compliance margin & non-tradable RTC accounts to alleviate concerns, and
- Work with stakeholders to understand and report back the implications of various potential shave levels.

Issue - Water Demand & Wastewater Discharge

Concern that water purveyors and waste water treatment facilities cannot meet the 2% increase in water demand and wastewater generated.

Proposed Staff Action

- Invite/consult with water purveyors, water regulatory agencies, and wastewater treatment facilities about the impacts of staff's proposal, and
- Explore the feasibility of offsetting the increase by using ground water wells, recycled water, or other means.

Issue - CEQA Implications & Permitting

 Adequate time must be provided to implement staff proposal. (Title V, CEQA, BACT, NSR, offset provisions, water use and discharge, water conservation, and building permits.)

Proposed Staff Action

- Work with WSPA and stakeholders to develop a BARCT strategy compatible with current permitting environment, and
- Explore a Program Environmental Assessment that could address and mitigate potential CEQA impacts.

Next Steps

- Continue to Meet with Stakeholders
- Refinery Committee Meetings
- Release Draft CEQA
- On-going CEQA and Socioeconomic Analyses
- Public Hearing 2nd Quarter of 2010